

00/987849

- 52 -

System and Method for Managing Computer System Resources Using Command Control Vectors

Abstract

5 A system, method and computer program product for processing multiple
tasks using a single copy of a data object employs command control vectors
(CCVs) for representing tasks. A CCV includes pointers to method objects that
store instructions for processing tasks and pointers to data objects that store
temporary data generated by execution of the method objects. A command
response manager manages a queue of CCVs. A separate CCV is generated for
each session thread. Multiple CCVs can point to the same method object so that
only a single copy of a method object needs to be provided. In one embodiment,
CCVs are used in a telecommunication network emulator, where each CCV
points to a command response table method object that includes a variety of
responses for a variety of inputs. When a CCV points to a script invocation
within a command response table, the CCV includes a field for pointing to the
invoked script, a field for pointing to a particular offset within the script and a
field for pointing to a data object that stores data associated with execution of the
script for the CCV. The temporary data object and the virtual instructions of the
script form a virtual data object.

A116-04.WPD